



# Meeting Notes

## Outdoor Lighting Focus Group Meeting

**2:00 p.m. – Tuesday, July 7, 2009**

APS Conference Room, 101 West Cherry Ave, Flagstaff, AZ

### **1. Welcome and Introductions**

#### In attendance:

Roger Eastman, City of Flagstaff  
John Grahame, Dark Skies Coalition  
Ed Larsen, City of Flagstaff  
Chuck Ley, City of Flagstaff  
Wes Lockwood, Citizen  
Chris Luginbuhl, Navel Observatory  
Amy Smith, RPI Services  
Erick Souders, Friends of Flagstaff  
Mary Jo Tsitouris, City of Flagstaff

### **2. Recap Focus Group purpose**

The Focus Group will be outcome focused with a strong emphasis on general issues rather than getting into the details of technical code review. A primary goal is to ensure that the code implements the Regional Plan.

### **3. Discussion regarding outdoor lighting and related issues associated with the rewrite of the Land Development Code**

#### 1. Problem sections in the code

Where are there frequent violations? Staff input required at the next meeting.

- Add a new section with rules for adding new lights to existing buildings. It must also deal with lumens per acre for existing developments.
- Need to better define the breaks between lighting zones – especially in the Butler/I-40 area. Add as a GIS layer. No need to change the zone II boundary on the east side of town because of the observatory off Lake Mary Road.
- Sports lighting (already addressed by the Focus Group)
- Canopy lighting on gas stations – rules allow someone to make the canopy bigger and therefore get more lighting. But design guidelines promote reduced canopy area (better design) and therefore less lighting. Resolve this conflict.

- Residential lighting – add a new rule for light trespass (already addressed by the Focus Group)
- Architectural lighting – architects want the ability to do more as it is good for accents on buildings. Design constraints from unshielded lights are the issue – but group agrees that downward lighting is OK mounted in soffits, etc. Possibly add design options for how to accomplish appropriate architectural lighting in the design guidelines.
- Security lighting - should not be included with lumen calculations as they are wired for a power failure or an alarm and are not activated or turned on unless in an emergency. Would not be wired to a motion detector. But how do you define security lighting – Chris has a concern that this is a loop hole. Maybe define more precisely as “emergency lighting” ... Chris to review with staff.
- Lumens – need to deal with light loss/efficiency decline over time. Discussion that this is open to interpretation, and hence the issue has been avoided in the past. The use of initial lumens is unambiguous, which is why this is the preferred approach. Large advantage for LPS because they have low lumen loss over time. With new lighting technologies there will likely be less loss of lumens over time. Metal halide is the worst for lumen loss – up to 50% loss over time. Consensus to leave the issue as “initial lumens”.
- Pedestrian lighting – more white light in pedestrian areas; should rather be Class 1. How do we define pedestrian areas? Rather allow 10% max. white light of the lumen budget for the property in lighting design.
- Lighting for signage – maintain standards in place today and exempt internally illuminated signs. Not an issue, even in downtown. But, may be an issue where externally illuminated signs are proposed in a new development.
- LED – how to control output? Rather deal with the effect – no blinking, flashing, etc. lights. Consensus that we should borrow ideas from Sign Code on this issue. OK with change of color, if the change is made during the day. Cross reference from signs to lighting and vice versa. No changes in decorative lighting that changes minute by minute. Also how to deal with LCD lights in signs?
- Decorative lighting – look at lamp output and size. Need to allow LED in a variety of colors. Define how frequently changes would be allowed. But LED lights in signs are set to be bright during the day and would therefore be even brighter at night! Issue for Signage Focus Group – should we even attempt to prohibit LED signs?
- Better definition and diagrams for fully shielded, partially shielded and unshielded fixtures.

## 2. New ideas for consideration:

- Explore the idea of a light curfew in parking lots and schools

Residential areas - need to keep lights on. But schools, churches etc. should be subject to a curfew. Insurance risk? Property owners may

want more indemnification in case of crime (mugging) or theft. As an option, turn off some lights and leave a basic minimum of light in parking areas. It was noted that some Texas schools reduced vandalism by turning off the lights – provided a savings on crime related costs and energy savings. Or write a code that requires lights on within X distance of a building. Dimming lights or turning off X percentage of lights in a parking area – also have street lights providing light in parking area and keep some lights on near the buildings.

Check in with PD on their security perspective. Amy will talk with Joe Connell from Flagstaff PD and will respond back via e-mail on their discussion.

- Consider a comprehensive lighting plan for large developments similar to that used for a comprehensive sign plan

A Comprehensive Sign plan provides incentives for a larger sign but the City has more control over the design of the sign. i.e. if a bigger sign is needed, then the City can ask for a better designed sign that meets community aesthetic values. This could be applied to the lighting code...

Under the current code, what additional benefits could we get that we could offer incentives for? Trade more light for a curfew? Trade more lumens for a different background on a sign? Brainstorm for tradable credits and incentives – work with Chris and Wes on this. [Most of the light pollution at Mars Hill comes from traffic – trade-offs may not be sufficient to really make a difference.]

- Incentives for the removal of non-conforming light fixtures

Concern that all lights pre-1989 are “grandfathered” – they account for 50% of existing lights in Flagstaff.

Reducing non-conforming lights is an incentive that can be tied to a comprehensive lighting plan

Education issue – Dark Skies Coalition. Also City and APS work together on an incentive program. But resources are an issue (money and volunteer time). Reinforce the pay back in energy efficiency resulting from eliminating old lights and adding new compliant lights.

- Cross reference to the International Dark Skies Association list of dark sky approved/friendly light fixtures

Need to review the fixtures and ensure they parallel our code. But there is a possibility that over time the list may be amended and inappropriate fixtures added as it a private organization that may be swayed by other communities with less stringent standards than

Flagstaff. Use the lamps approved in the IDA as a guide – not a guarantee of use.

Chris to contact IDA – ask for their guidelines/criteria on how they select a fixture for their list.

3. Lighting in multi-family complexes – Amy has some comments with safety and design issues

Pineview Apartments behind Barnes and Noble – trying to update and improve the aesthetics of the complex

Look at some flexibility within a set threshold for allowing more light than the code would otherwise require when a property owner is trying to update their project and bring it into compliance when other pre-existing constraints prevent full compliance. Waiver opportunity?

Codify what we are all ready doing for this kind of situation – e.g. gas stations. Consider requiring a lighting designer to get involved to assess what is possible and what the constraints are, then submit to the city for review and approval. Chris's example - \$800 for a lighting study.

Consensus from the group on this idea – relates to the non-conforming issue discussed earlier.

4. Next meeting: None – mission accomplished. Good job all!!

5. Adjournment at 3:33 pm.